



U. S. Department
of Transportation

**Federal Aviation
Administration**

Great Lakes Region
Illinois, Indiana, Michigan,
Minnesota, North Dakota
Ohio, South Dakota, and
Wisconsin

2300 E Devon Avenue
Des Plaines, Illinois 60018

September 30, 2005

Ms. Rosemarie Andolino
Executive Director, O'Hare Modernization Program
8755 West Higgins Road
Chicago, Illinois 60631

Re: Chicago O'Hare International Airport
Modifications to Standards Approval

We have completed a review of a request for a Modifications of Standards submitted by Ricondo & Associates on June 6, 2005 on behalf of the City of Chicago. Our review was performed under Airspace Case No. 2003-AGL-0878-NRA. Specifically, the City of Chicago has requested the following nine (9) modifications to standards:

1. Future Runway 9L/27R CAT II Runway/Taxiway Separation,
2. Future Runway 9R/27L CAT II Runway/Taxiway Separation,
3. Future Runway 10L/28R CAT II Runway/Taxiway Separation,
4. Future Runway 22R Localizer,
5. Taxiway A to Service Road – Concourses C, E, F, G, and H,
6. Taxiway A to H to Service Road – Concourses K, L and B,
7. Taxiway A to Taxiway B Separation,
8. Runway 4R Safety Area,
9. Runway 22L Safety Area.

The FAA has reviewed each request for a modification to standard; a summary of each proposed modification is presented below:

- 1) Future Runway 9L/27R CAT II Runway/Taxiway Separation – The City of Chicago's proposed new north runway, as depicted on the draft October 2003 Airport Layout Plan (ALP), had a full-length parallel taxiway. The taxiway/runway centerline separation for the western most 2,750 feet was depicted at 500', with the remaining easterly 4,750' depicted as 400'. The FAA evaluated six alternatives including the preferred alternative of eliminating a portion of the taxiway between the high speed runway exits on the east side and the taxiway intersection with existing Runway 14L to the west. Based on an FAA analysis of each alternative, and the proposed flow of aircraft on the

taxiway network, the FAA concludes that removing a portion of the parallel taxiway from the intersection of Runway 14L east to the first high speed runway exit preserves the operational efficiency of the airfield. Therefore, the FAA grants this modification to the separation as depicted on the September 2005 ALP and no modification to the proposed taxiway network is required in this area.

- 2) Future Runway 9R/27L CAT II Runway/Taxiway Separation – The City of Chicago has proposed a 3,594 foot runway extension to the west of Future Runway 9R/27L. The runway/parallel taxiway separation between the existing runway and taxiway (Taxiway H) is 367'. For the length of the runway extension, the separation is increased to 400 feet. The existing taxiway would not be relocated. However, a second parallel would be located on the west end of the runway that would provide a 700' runway to taxiway centerline separation. The FAA evaluated three potential alternatives. Based on an analysis of each of the alternatives, the FAA has determine that during CAT II/III conditions with the proposed runway/taxiway layout as depicted on the September 2005 ALP, Airport Design Group (ADG) V aircraft would be restricted from operating on the closest taxiway (400' spacing) and the existing Taxiway H when the runway is used for mixed operations. ADG V aircraft would be required to taxi on the second parallel taxiway whose centerline is location 700' from the runway centerline. Therefore, the FAA grants this modification to the separation and no modification to the proposed taxiway network is required in this area.
- 3) Future Runway 10L/28R CAT II Runway/Taxiway Separation – The City of Chicago has proposed a 2,859 foot runway extension to the west on Future Runway 10L/28R. The runway/parallel taxiway separation between the existing runway and parallel taxiway (Taxiway M) is 500' along the entire length of the runway. A full-length 13,000-foot parallel taxiway will be provided with a separation distance of 500 feet from the runway centerline for the west 9,250 feet of taxiway and 400-foot separation for the east 3,750 feet of relocated Taxiway M as shown on the future ALP. The FAA evaluated a total of three potential alternatives. Based on an analysis of each of the alternatives, the FAA has determine that during CAT II/III conditions with the proposed runway/taxiway layout as depicted on the September 2005 ALP, Airport Design Group (ADG) V aircraft would be restricted from operating on the closest taxiway (400' spacing) and the relocated Taxiway M when the runway is used for mixed operations. ADG V aircraft would be required to taxi on the second parallel taxiway whose centerline is location 667' from the runway centerline. Therefore, the FAA grants this modification to the separation and no modification to the proposed taxiway network is required in this area.
- 4) Future Runway 22R Localizer – The City of Chicago proposes the relocation of the existing Runway 22R localizer from a position west of existing Runway 14R/32L to 967 feet from the Runway 4L threshold, 33 feet inside the Runway Safety Area (RSA). The FAA does not grant modifications to standards to RSAs. All runway safety area recommendations are based on a RSA determination.

- 5) Taxiway A to Service Road – Concourses C, E, F, G, and H – The existing separation from Taxiway A to the Terminal Core service road located adjacent to Concourses C, E, F, G and H is 131 feet and does not meet the Aircraft Design Group (ADG) V standard of 160 feet. However, this design separation was based on ADG V standards at the time of taxiway and terminal development. Use of Taxiway A by ADG V aircraft is permitted however, under the terms of an existing Grant of Exemption to FAR Part 139. A separation of 131 feet is acceptable subject to the terms of the Exemption. Therefore, the FAA grants this modification to the separation and no modification to the proposed taxiway network is required in this area.
- 6) Taxiway A to H to Service Road – Concourses K, L and B – The existing separation from Taxiway A centerline to the service road located east of existing Concourses K and L is 153 feet. The existing separation from Taxiway H centerline to the service road located north of Concourse B and along the airport property fence is also 153 feet. This design separation is consistent with criteria in effect at the time of construction. ADG V aircraft are permitted to use Taxiways A and H based on the 153-foot separation from the service road at Concourses K, L, and B subject to existing restrictions of Boeing 747 series aircraft on Taxiways A and B and subject to aircraft restrictions on Taxiway H contained in FAA Air Traffic Order 7110.65C. Therefore, the FAA retains this modification to the separation standard and no modification to the proposed taxiway network is required in this area.
- 7) Taxiway A to Taxiway B Separation – The existing separation from Taxiway A to Taxiway B centerlines around the terminal core area is 251 feet and consistent with FAA design criteria in effect at the time the taxiways were built. Since Taxiways A and B were constructed, ADG V taxiway-to-taxiway separation criteria was revised to 267 feet. FAA has developed operating restrictions contained in FAA Air Traffic Order 7110.65C to manage this existing condition. The FAA evaluated two additional alternatives of which neither resulted in a feasible option. The FAA has determined that though the existing separation is 16 feet less than the standard, the operational restriction currently in place provides safe aircraft movements. Therefore, the FAA retains this modification to the separation standard and no modification to the proposed taxiway network is required in this area.
- 8) Runway 4R Safety Area – The existing approach end of Runway 4R currently has a full-width RSA for a length of 739 feet, 261 feet less than the standard 1,000 feet. The FAA does not grant modifications to standards to RSAs. All runway safety area recommendations are based on a RSA determination. The City of Chicago has submitted an RSA Practicability Study for this Runway. The FAA will work with the Sponsor in determining the best resolution for this RSA.

- 9) Runway 22L Safety Area – The existing approach end of Runway 22L currently has a full-width RSA for a length of 498 feet, 502 feet less than the standard 1,000 feet. The FAA does not grant modifications to standards to RSAs. All runway safety area recommendations are based on a RSA determination. The City of Chicago has submitted an RSA Practicability Study for this Runway. The FAA will work with the Sponsor in determining the best resolution for this RSA.

Based on the FAA's review, this office hereby concurs in the request for modification numbers 1, 2, 3, 5, 6, and 7 listed above. The request for modification numbers 4, 8, and 9 are specifically related to Runway Safety Areas and are not items for which the FAA grants modifications to standards. However, the FAA will work with the Sponsor in determining the best resolution for the RSAs. Please note that the City of Chicago will be considered the Office of Record for Modifications to Standards. Failure to retain proper records may require the request for the modifications to be re-submitted in the future for FAA consideration.

If you have any questions or need any additional information, please do not hesitate to contact either me or Richard Kula of my staff at (847) 294-7507.

Sincerely,

A handwritten signature in black ink, appearing to read "Philip M. Smithmeyer". The signature is fluid and cursive, with the first name "Philip" being the most prominent part.

Philip M. Smithmeyer
Manager, Chicago Airports District Office

cc: O'Hare ATCT